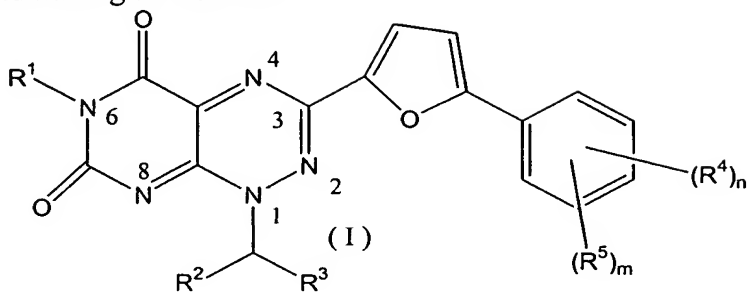
Claims

1. A compound having the formula



(I)

the *N*-oxide forms, the pharmaceutically acceptable addition salts and the stereochemically isomeric forms thereof, wherein:

m represents an integer being 0 or 1;

n represents an integer being 0, 1 or 2;

R^1 represents hydrogen, C_{1-4}alkyl, hydroxyC_{1-4}alkyl, C_{1-4}alkyloxycarbonyl or C_{1-4}alkyl substituted with phenyl, pyridinyl or morpholinyl,
phenyl or phenyl substituted with one or where possible more substituents each independently being selected from C_{1-4}alkyl, C_{1-4}alkyloxycarbonyl, $-NO_2$ or cyano-C_{1-4}alkyl,
piperidinyl or piperidinyl substituted with one or where possible more substituents each independently being selected from C_{1-4}alkyl, C_{1-4}alkyloxycarbonyl or phenyl-C_{1-4}alkyl,
phenyl-C_{1-4}alkyl or C_{1-4}alkyloxycarbonyl;

R^2 represents hydrogen, phenyl, C_{1-4}alkyl or C_{1-4}alkyl substituted with phenyl or hydroxy;

R^3 represents hydrogen, phenyl, C_{1-4}alkyl or C_{1-4}alkyl substituted with phenyl or hydroxy; or

R^2 and R^3 taken together with the carbon atom to which they are attached form a C_{3-8}cycloalkyl or Het^1 wherein said C_{3-8}cycloalkyl or Het^1 each independently may optionally be substituted with one, or where possible, two or three substituents each independently selected from C_{1-4}alkyloxycarbonyl, phenylcarbonyl C_{1-4}alkylsulfonyl, aminosulfonyl, mono- or di(C_{1-4}alkyl)aminosulfonyl or $-C(=NH)-NH_2$;

R^4 represents halo, hydroxy, hydroxyC_{1-4}alkyl or C_{1-4}alkyloxy;

R^5 represents formyl, C_{1-4}alkyl, C_{1-4}alkyloxy, Het^2, $-NO_2$, $-SO_2-Het^6$, aminosulfonyl, $-SO_2-NR^{12}R^{13}$,

C_{1-4}alkyl substituted with one or where possible more substituent being selected from hydroxy, halo, Het^3, NR^6R^7 or formyl,

C_{1-4}alkyloxy substituted with one or where possible more substituents being selected from Het^4, NR^8R^9 or $-C(=O)-Het^4$;

R^6 and R^7 are each independently selected from hydrogen, C_{1-4}alkyl, $-Het^5$, aminosulphonyl, mono- or di(C_{1-4}alkyl)aminosulfonyl, C_{1-4}alkylsulfonyl, C_{1-4}alkyloxycarbonyl, C_{1-4}alkyloxyC_{1-4}alkyl, methoxyC_{1-4}alkyl or C_{1-4}alkyl substituted with one or where possible more substituents being selected from hydroxy, Het^5, C_{1-4}alkyloxycarbonyl or C_{1-4}alkylsulfonyl;

R^8 and R^9 are each independently selected from hydrogen, mono- or di(C_{1-4}alkyl)aminosulphonyl or aminosulphonyl;

R^{12} and R^{13} are each independently selected from hydrogen, C_{1-4}alkyl, C_{1-4}alkyloxyC_{1-4}alkyl;

Het^1 represents piperidinyl;

Het^2 represents a heterocycle selected from piperidinyl, or piperazinyl wherein said monocyclic heterocycles each independently may optionally be substituted with one, or where possible two or three substituents each independently selected from C_{1-4}alkyloxycarbonyl;

Het^3 represents a heterocycle selected from morpholinyl, pyrrolidinyl, piperidinyl, or piperazinyl wherein said monocyclic heterocycles each independently may optionally be substituted with one, or where possible two or three substituents each independently selected from hydroxy, C_{1-4}alkyl, C_{1-4}alkyloxycarbonyl, hydroxyC_{1-4}alkyl, aminosulfonyl, mono- or di(C_{1-4}alkyl)aminosulfonyl, $NR^{10}R^{11}$, imidazolyl, tetrahydropyrimidinyl, amino, NH_2-SO_2-O-, mono- or di(C_{1-4}alkyl)amino- SO_2-O-, NH_2-SO_2-NH-,

mono- or di(C_{1-4}alkyl)amino- SO_2-NH- , hydroxyC_{1-4}alkyloxyC_{1-4}alkyl, C_{1-4}alkyloxyC_{1-4}alkyl or C_{1-4}alkyloxy;

R^{10} and R^{11} are each independently selected from hydrogen, C_{1-4}alkyl, C_{1-4}alkyloxycarbonyl, or mono- or di(C_{1-4}alkyl)aminosulfonyl;

Het^4 represents a heterocycle selected from morpholinyl, piperidinyl or piperazinyl wherein said monocyclic heterocycles each independently may optionally be substituted with one, or where possible two or three substituents each independently selected from C_{1-4}alkyl, aminosulphonyl, mono- or di(C_{1-4}alkyl)aminosulfonyl or C_{1-4}alkyl substituted with one or more hydroxy;

Het^5 represents a heterocycle selected from pyridinyl, pyrrolidinyl, or piperidinyl wherein said monocyclic heterocycles each independently may optionally be substituted with one, or where possible two or three substituents each independently selected from C_{1-4}alkyl, aminosulfonyl, C_{1-4}alkyloxycarbonyl or mono- or di(C_{1-4}alkyl)aminosulfonyl;

Het^6 represents morpholinyl.

2. A compound according to claim 1 wherein;

R^1 represents C_{1-4}alkyl preferably methyl, C_{1-4}alkyl substituted with pyridinyl, phenyl, piperidinyl or piperidinyl substituted with C_{1-4}alkyloxycarbonyl;

R^2 represents hydrogen or C_{1-4}alkyl preferably methyl;

R^3 represents hydrogen or C_{1-4}alkyl preferably methyl; or

R^2 and R^3 taken together with the carbon atom to which they are attached form cyclopentyl or piperidinyl wherein said cyclopentyl or piperidinyl each independently may optionally be substituted with one, or where possible, two or three substituents each independently selected from C_{1-4}alkyloxycarbonyl, phenylcarbonyl or $-C(=NH)-NH_2$;

R^4 represents halo or C_{1-4}alkyloxy;

R^5 represents Het^2, C_{1-4}alkyl substituted with one or where possible more substituents being selected from hydroxy, halo, Het^3 or NR^6R^7, or R^5 represents

C_{1-4}alkyloxy substituted with one or where possible more substituents being selected from Het^4 or $-C(=O)-Het^4$;

R^6 and R^7 are each independently selected from hydrogen, C_{1-4}alkyl, Het^5 or C_{1-4}alkyl substituted with one or where possible more substituents being selected from hydroxy or Het^5;

Het^2 represents piperazinyl;

Het^3 represents a heterocycle selected from morpholinyl, pyrrolidinyl, piperidinyl, or piperazinyl wherein said monocyclic heterocycles each independently may optionally be substituted with one, or where possible two or three substituents each independently selected from C_{1-4}alkyl preferably methyl, aminosulfonyl, mono- or di(C_{1-4}alkyl)aminosulfonyl, hydroxyC_{1-4}alkyloxyC_{1-4}alkyl, C_{1-4}alkyloxyC_{1-4}alkyl or C_{1-4}alkyloxy;

Het^4 represents a heterocycle selected from morpholinyl or piperazinyl wherein said monocyclic heterocycles each independently may optionally be

substituted with one, or where possible two or three C_{1-4}alkyl substituents, preferably methyl;

Het^5 represents a heterocycle selected from pyridinyl, pyrrolidinyl or piperidinyl wherein said monocyclic heterocycles each independently may optionally be substituted with one, or where possible two or three substituents each independently selected from aminosulfonyl, C_{1-4}alkyloxycarbonyl or mono- or di(C_{1-4}alkyl)aminosulfonyl.

3. A compound according to claim 1 wherein;

R^1 represents C_{1-4}alkyl preferably methyl, C_{1-4}alkyl substituted with phenyl, or R^1 represents piperidinyl or piperidinyl substituted with C_{1-4}alkyloxycarbonyl;

R^2 represents hydrogen, phenyl, C_{1-4}alkyl or C_{1-4}alkyl substituted with phenyl;

R^2 represents hydrogen, phenyl, C_{1-4}alkyl or C_{1-4}alkyl substituted with phenyl; or

R^2 and R^3 taken together with the carbon atom to which they are attached form cyclopentyl or piperidinyl wherein said cyclopentyl or piperidinyl each independently may optionally be substituted with one, or where possible, two or three substituents each independently selected from C_{1-4}alkyloxycarbonyl, C_{1-4}alkylsulfonyl, mono- or di(C_{1-4}alkyl)aminosulfonyl or phenylcarbonyl;

R^4 represents halo, preferably Cl or R^4 represents C_{1-4}alkyloxy preferably methoxy;

R^5 represents formyl, C_{1-4}alkyl substituted with one or where possible more substituent being selected from hydroxy, Het^3 or NR^6R^7, or R^5 represents C_{1-4}alkyloxy substituted with one or where possible more substituents being selected from Het^4 or -C(=O)-Het^4;

R^6 and R^7 are each independently selected from hydrogen, C_{1-4}alkyl, -Het^5, C_{1-4}alkylsulfonyl, methoxyC_{1-4}alkyl, or C_{1-4}alkyl substituted with one or where possible more substituents being selected from hydroxy or Het^5;

Het^2 represents piperidinyl optionally substituted with C_{1-4}alkyloxycarbonyl;

Het^3 represents a heterocycle selected from morpholinyl, pyrrolidinyl, piperidinyl, or piperazinyl wherein said monocyclic heterocycles each independently may optionally be substituted with one, or where possible two or three substituents each independently selected from hydroxy, C_{1-4}alkyl, C_{1-4}alkyloxycarbonyl, hydroxyC_{1-4}alkyl, aminosulfonyl, mono- or di(C_{1-4}alkyl)aminosulfonyl, $NR^{10}R^{11}$, imidazolyl, tetrahydropyrimidinyl, amino, hydroxyC_{1-4}alkyloxyC_{1-4}alkyl, C_{1-4}alkyloxyC_{1-4}alkyl or C_{1-4}alkyloxy;

R^{10} and R^{11} are each independently selected from hydrogen or C_{1-4}alkyl;

Het^4 represents a heterocycle selected from morpholinyl or piperazinyl wherein said monocyclic heterocycles each independently may optionally be substituted with one, or where possible two or three C_{1-4}alkyl substituents, preferably methyl;

Het^5 represents a heterocycle selected from pyridinyl, pyrrolidinyl or piperidinyl wherein said monocyclic heterocycles each independently may optionally be substituted with one, or where possible two or three substituents each independently selected from C_{1-4}alkyl, aminosulfonyl, C_{1-4}alkyloxycarbonyl or mono- or di(C_{1-4}alkyl)aminosulfonyl.

4. A compound as claimed in any one of claims 1 to 3 wherein R^2 and R^3 taken together with the carbon atom to which they are attached form a C_{3-8}cycloalkyl, preferably cyclopentyl.

5. A compound as claimed in any one of claims 1 to 4 provided that when R^5 represents a C_{1-4}alkyloxy substituted with Het^4, said Het^4 is being selected from the group consisting of morpholinyl, piperidinyl, piperazinyl and piperazinyl substituted with one C_{1-4}alkyl, preferably methyl.

6. A compound as claimed in any one of claims 1 to 4 provided that when R^5 represents a C_{1-4}alkyloxy substituted with $-C(=O)-Het^4$, said Het^4 consists of piperazinyl preferably substituted with C_{1-4}alkyl.

7. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and, as active ingredient, an effective kinase inhibitory amount of a compound as described in any one of the claims 1 to 6.

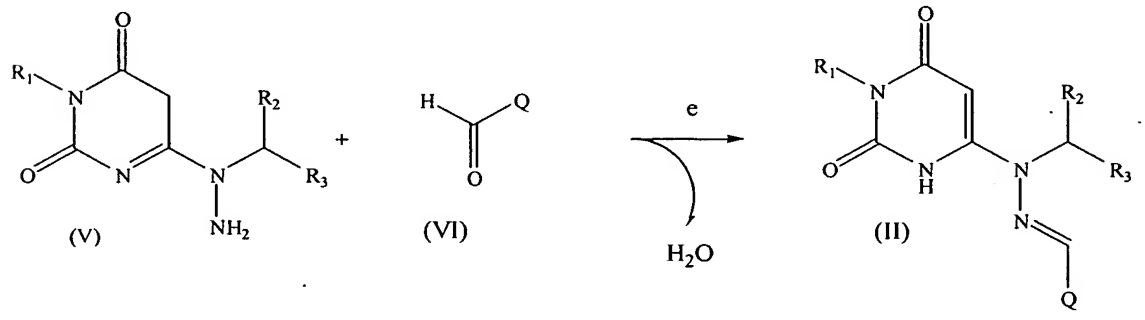
8. A process of preparing a pharmaceutical composition as defined in claim 7, characterized in that, a pharmaceutically acceptable carrier is intimately mixed with an effective kinase inhibitory amount of a compound as described in any one of claims 1 to 6.

9. A compound as claimed in any one of claims 1 to 6 for use as a medicine.

10. Use of a compound as claimed in any one of claims 1 to 6 in the manufacture of a medicament for treating cell proliferative disorders such as atherosclerosis, restinosis and cancer.

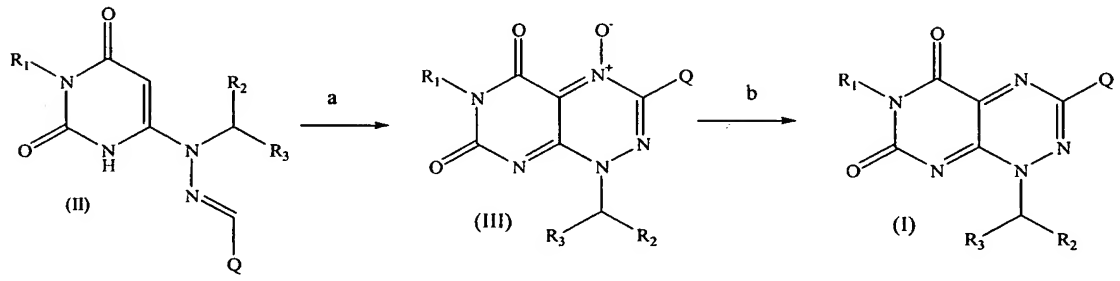
11. A process of preparing a compound as described in claim 1, characterized by

i) reacting a primary amine of formula (V) with an aldehyde of formula (VI) in a condensation reaction using ethanol as a suitable solvent;



e) EtOH

ii) followed by a nitrosative cyclisation of the thus obtained Schiffs bases of formula (II) with $NaNO_2$ in acetic acid, and refluxing the nitroso intermediates of formula (III) in a suitable solvent such as acetic anhydride or ethanol further comprising dithiothreitol (DTT);



a) $NaNO_2$, AcOH, H_2O b) DTT, EtOH